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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,649	01/06/2006	Kevin R. Boyle	GB030108	1976
65913	7550	06/10/2009	EXAMINER	
NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			DUONG, DIEU HIEN	
			ART UNIT	PAPER NUMBER
			2821	
			NOTIFICATION DATE	DELIVERY MODE
			06/10/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/563,649

Applicant(s)

BOYLE, KEVIN R.

Examiner

DIEU HIEN T. DUONG

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is a response to applicant's amendment filed 02/19/2009. In virtue of this amendment, claims 1-21 are currently in the instant application.
2. The affidavits or declaration filed on 02/19/2009 under 37 CFR 1.131 is sufficient to overcome the Tracy (US 2004/0252062) reference.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-7, 9-10, 12-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto et al. (US 2003/0132885 A1).

Regarding claims 1, 7 and 12, Kuramoto discloses, in Figures, 1, 3 and 19, a communications device comprising

an antenna (90, Figure 19) connected by a self supporting member (Figure 1A) having at least one feed pillar (3) and a shorting pillar (7) providing support, the pillars (3, 7) being extending from an antenna interface (dielectric surface 2) of the self supporting member (Figure 1A), the antenna (80, Figure 18A) connected to the antenna interface by a pressure connection.

Kuramoto does not disclose, the pillars being substantially permanently connected to respective contact points of a RF circuit.

However, such difference is not patentable merits since it would have been common practice in the art that the pillars are substantially permanently connected to respective contact points of a RF circuit to transmit and/or receive the communication signals. Therefore, to employ having the pillars are substantially permanently connected to respective contact points of a RF circuit would have been deemed obvious to person skill in the art of antenna.

Regarding claims 3-4 and 9-10, as applied to claims 1 and 7, Kuramoto discloses, in Figures 3a-3B, wherein the self supporting member is metallic; wherein the self supporting member comprises a metallised insulating material.

Regarding claim 6, Kuramoto discloses every feature of claimed invention as expressly recited in claim 1, except for the antenna being a PIFA. However, such difference is not patentable merits since it would have been matter of design choice to have the antenna being the PIFA and since such modification would have involved a mere change in the type of a antenna. A change in type is generally recognized as being within the level of ordinary skill in the art.

Regarding claim 13, as applied to claim 12, Kuramoto discloses, in Figure 18A, wherein the antenna (80) is further supported by mounting posts disposed between the antenna (80) and the RF circuit around the antenna periphery.

Regarding claim 16, as applied to claim 1, Kuramoto discloses, in Figure 18A, wherein the antenna interface (surface of the dielectric 2) is located to minimize differential mode currents.

5. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto et al. (US 2003/0132885 A1) in view of Kadambi et al. (US 2002/0140612 A1 of record), hereinafter "Kadambi".

Regarding claims 2 and 8, Kuramoto discloses every feature of claimed invention as expressly recited in claims 1 and 7, except for wherein the antenna comprises a dual band, dual feed antenna, characterised in that the self supporting member has two feed pillars disposed one on either side of the shorting pillar.

Kadambi discloses, in Figure 7, wherein the antenna comprises a dual band, dual feed antenna, characterised in that the self supporting member has two feed pillars disposed one on either side of the shorting pillar.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the feed of Kuramoto with the feed having two feed pillars disposed one on either side of the shorting pillar as taught by Kadambi in order to satisfy the gain performance of the antenna (see page 2, par. [0008], lines 42-45).

6. Claims 5, 11, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto et al. (US 2003/0132885 A1) in view of Koskiniemi et al. (US 2003/0098813 A1 of record).

Regarding claims 5 and 11, as applied to claims 1 and 7, Kuramoto discloses, in Figures 1, 3, the self supporting member comprising a metallised insulating material having.

Kuramoto does not disclose the self supporting member comprising at least one embedded capacitor.

Koskiniemi discloses, in Figure 7A, the self supporting member (707, 712, 715) comprising at least one embedded capacitor (716).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the capacitor of Koskiniemi in the self supporting member of Kuramoto to achieve the claimed invention, doing so would matching impedance of the antenna and its operating frequency band (see par. [0028], lines 15-21).

Regarding claim 14, as applied to claim 1, Kuramoto/Koskiniemi disclose, (Koskiniemi, Figure 10), wherein further comprising a housing and wherein the antenna is supported by the housing.

Regarding claim 21, as applied to claim 1, Kuramoto/Koskiniemi disclose, (Koskiniemi, Figures 7A-7B), wherein an area between the at least one feed pillar (715) and the shorting pillar (712) is adapted to accommodate at least port of a bandwidth broadening resonant circuit (716).

7. Claims 15, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto et al. (US 2003/0132885 A1) in view of Carlson et al. (US 6,414,641 B1).

Regarding claims 15 and 19, Kuramoto discloses every feature of claimed invention as expressly recited in claims 1 and 12, except for wherein the antenna includes a plurality of spring contacts to form the pressure connection with the antenna interface.

Carlson discloses, in Figure 1, wherein the antenna includes a plurality of spring contacts (11, 12) to form the pressure connection with the antenna interface.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the spring contacts of Carlson the antenna of Kuramoto to achieve the claimed invention, doing so would provide impedance matching for the antenna (col. 1, lines 10-15).

Regarding claims 17 and 20, Kuramoto/Carlson disclose, (Kuramoto, Figures 1, 3; Carlson, Figure 1), wherein the antenna interface and the pressure connection are located to minimize differential mode currents.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto et al. (US 2003/0132885 A1) in view of Carlson et al. (US 6,414,641 B1) and further in view of Koskiniemi et al. (US 2003/0098813 A1).

Regarding claim 18, Kuramoto and Carlson disclose every feature of claimed invention except for wherein an area between the at least one feed pillar and the shorting pillar contains part of a bandwidth broadening resonant circuit, a remaining portion of the bandwidth broadening resonant circuit (813) residing on a circuit board that contains the RF circuit.

Koskiniemi discloses, in Figures 8A-8B and par. [0029], wherein an area between the at least one feed pillar (815) and the shorting pillar (812a, 812b) contains part of a bandwidth broadening resonant circuit (812a, 812b), a remaining portion of the bandwidth broadening resonant circuit (813) residing on a circuit board that contains the RF circuit.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the resonant circuit of Koskiniemi in the antenna of Kuramoto/Carlson to achieve the claimed invention, doing so would matching impedance of the antenna and its operating frequency band (see par. [0028], lines 15-21).

Inquiry

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

06/07/09
DD
AU 2821

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